

REMARKS

The Examiner rejected claims 1-9 under 35 USC 102(e) as being anticipated by Derryberry et al (US 6, 498, 785). Applicant respectfully responds to this Office Action. In this response, claims 4, 5 and 9 have been amended. New claims 10 and 11 have been added. These changes add no new matter to the application and are fully supported by the original disclosure.

Brief Description of the Claimed Invention

The claimed invention relates to a method of power control of the transmission level of a power control bit. Applicant refers to FIGs. 6 and 7 of the specification, and page 10 at paragraph 1037. This method overcomes problems in the prior art.

In systems using a shared channel for transmission of power control instructions it is difficult to know how the various power control commands sent on the reverse link are decoded at the base station. In a system where each mobile is assigned a fundamental channel (FCH), the mobile station can measure the FCH for such feedback. In a system using a shared channel, the mobile station may not see the effect of the Reverse Link Power Control (RL PC) commands.

The mobile station sends RL PC commands to the base station. The RL PC commands provide PC information used for control of the FL transmit power. The base station may receive these commands correctly and then respond accordingly. However, if the command is not received correctly, the mobile station has no way of knowing. It is beneficial for the mobile station to determine the response of the base station to the RL PC commands. When the RL PC commands have been corrupted at the base station receiver, the mobile station may use this information for reverse link power control. Therefore, it is desirable for the FL to include a power indication that echoes the RL PC commands received at the base station. In an embodiment, the required feedback is provided as a function of the *power level* of the RL PC commands.

Claims 1-9: Rejected Pursuant to 35 USC §102(e)

Regarding claim 1, the Examiner argues that the cited prior art teaches a remote station apparatus comprising a link quality estimation unit, generating a link quality estimate. However, the cited prior art merely refers to sending a series of transmissions of progressively higher power, also known as access probes, to the base station until the base station acknowledges receipt of the access probe. Conversely, Claim 1 in the present invention refers to a link quality estimation unit operative to generate a link quality estimate, in response to a first power control instruction received. This is shown in one embodiment as the "SNR Estimator" in FIG. 8. The cited prior art does not teach or even suggest a link quality estimation unit.

Furthermore, in the cited prior art, the base station receives access probes from the mobile station on the Reverse Common Channel (R-CCH) then the base station determines a power control command for the mobile station. This power control command is based on a parameter which indicates how much control information or data the mobile needs to send. Conversely, in the current claimed invention, the mobile station measures the SNR of the Forward Link *Power Control bits* (FL PC bits) on the Common Power Control Channel (CPCCH), makes a comparison using a threshold value, and a corresponding power control command at the appropriate power level is transmitted on the Reverse Link (RL). Effectively, the current claimed invention teaches FL power control of the FL PC commands. Applicant refers to page 11-12, paragraph 1038-1039. Derryberry does not teach or even suggest power control of *power control instructions* or bits as taught by the current claimed invention. Applicant respectfully submits claim 11 is patentable over the patent of record.

Claims 2 and 3 depend from claim 1 and claim 6 was rejected for the same reasons as claim 1. Claims 2, 3 and 6 are acceptable for at least the same reasons given above for claim 1.

Claim 4 has been amended to read "received power control instruction" and "transmission power level" for clarity. The Examiner argues that the cited prior art teaches an adjustment unit coupled to the determination unit, wherein the adjustment unit is operative to adjust a power level of the power control instruction, as recited in claim 4. However, the cited prior art merely teaches generating a power control command based on data received from the mobile station, such as how much control information or data the mobile needs to send. As noted above, the cited prior art does not teach or even suggest adjusting the power level of the

power control instruction or bit. Applicant respectfully submits claim 4 is in condition for allowance.

Claim 5 has been amended to recite "wherein a transmission power level of the power control instruction is initially set to a reference value." Claim 5 teaches power control of transmission of power control instructions. This is not taught or even suggested by the cited prior art. Furthermore, the cited prior art does not teach a base station having an initial power control instruction set to a reference power. Applicant respectfully submits claim 5 is now in condition for allowance.

Regarding claim 7, the measurement of SNR of the at least one power bit is done on the FL by the mobile station, whereas the cited prior art teaches a base station monitoring the SNR value on the RL. Applicant respectfully submits claim 7 is in condition for allowance.

Regarding claim 8 in the current invention, a first power control instruction for control of the reverse link is determined. In response to receiving a second power control instruction on the reverse link, a first transmission power level is determined, and the *first power control instruction is transmitted at the first transmission power level*. Conversely, the cited prior art teaches determining a first power control instruction based on a detected preamble received from a mobile station. In the current claimed invention, a first power control instruction is transmitted at a first transmission power level after the second power control instruction is received. Determining a first power level of a first power control instruction is not taught or even suggested by the cited prior art. Applicant respectfully submits claim 8 is in condition for allowance.

Claim 9 has been amended to recite "using a predetermined value." Generating a first reverse link power control instruction based on a predetermined value is not taught or even suggested by the cited prior art.

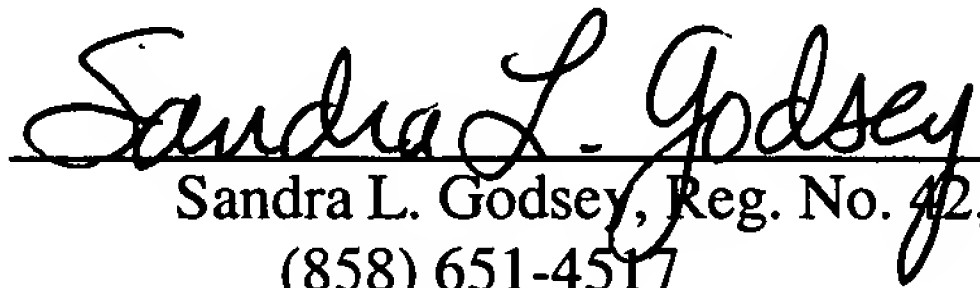
REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: 3/31/2004

By:


Sandra L. Godsey, Reg. No. 42,589
(858) 651-4517

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 651-4125
Facsimile: (858) 658-2502

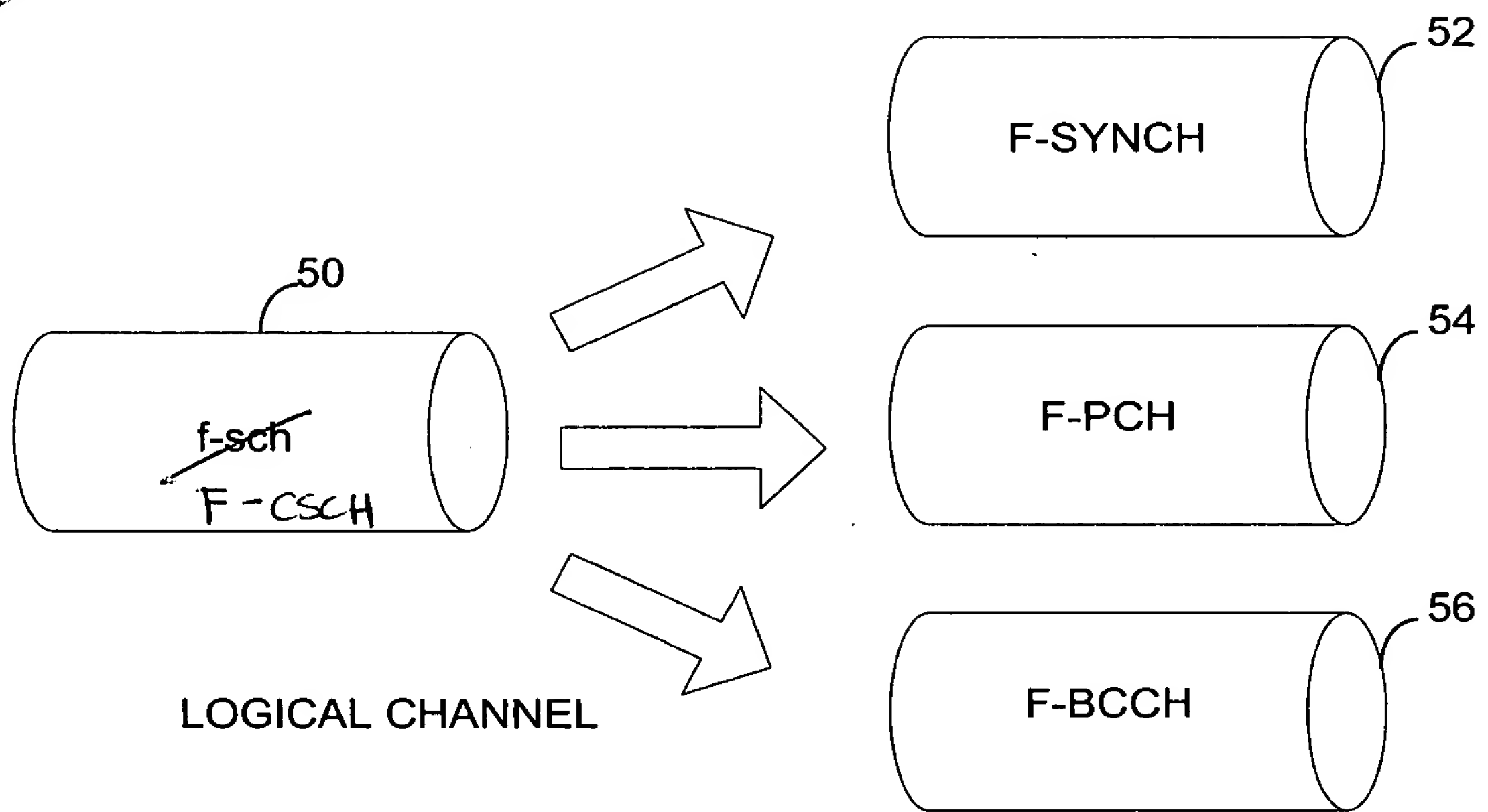


FIG. 2

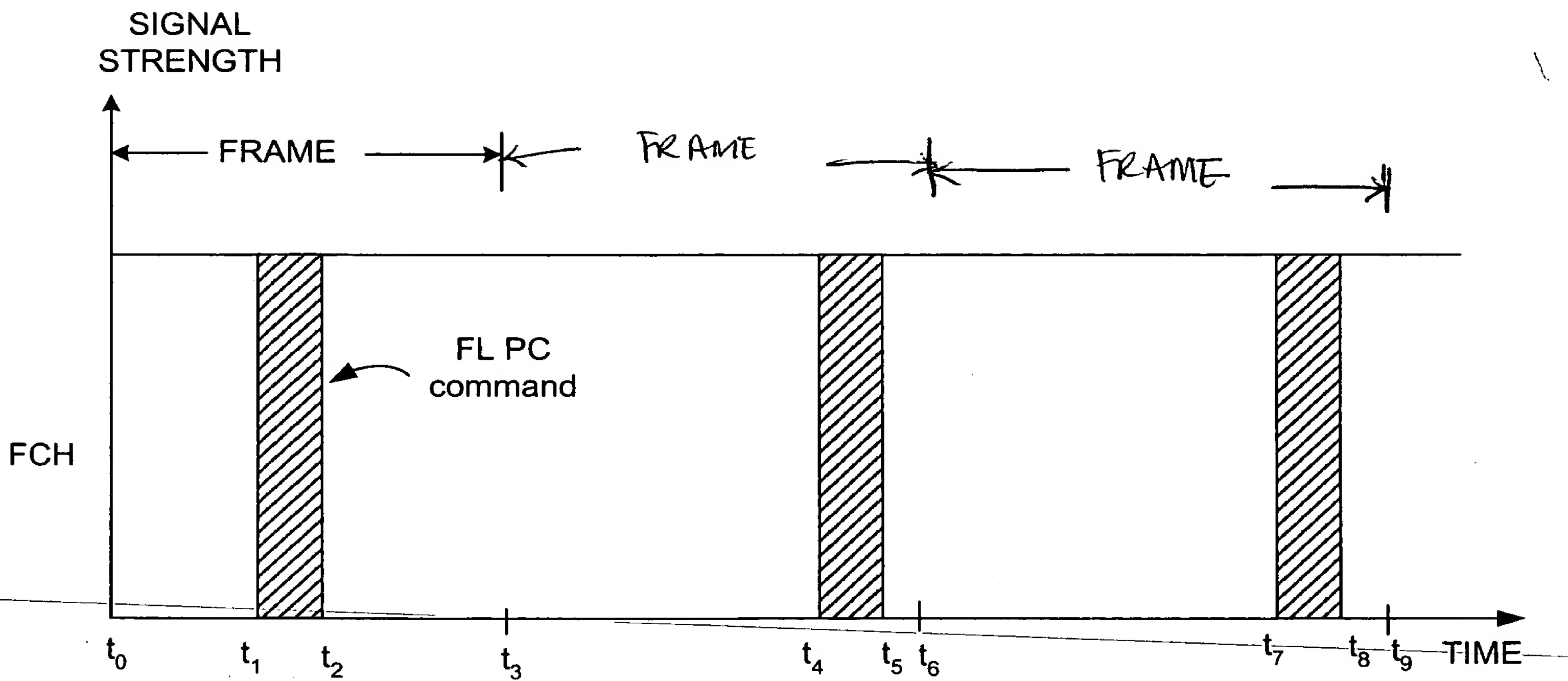


FIG. 4

200

202

RECEIVE
CIRCUITRY

CPCCH

SHEET 7/8

204

SNR
ESTIMATOR

206

THRESHOLD
COMPARATOR

208

PC BIT DECISION

212

SETPOINT
ADJUSTMENT

210

GENERATE PC BIT
TO TRANSMIT ON RL

218

DECODER

222

ADJUST RL TRAFFIC
TRANSMIT POWER

214

AMP

DATA
+
CONTROL
INFORMATION

DATA

RL PC COMMAND

TRANSMIT
CIRCUITRY

216

FIG. 8

